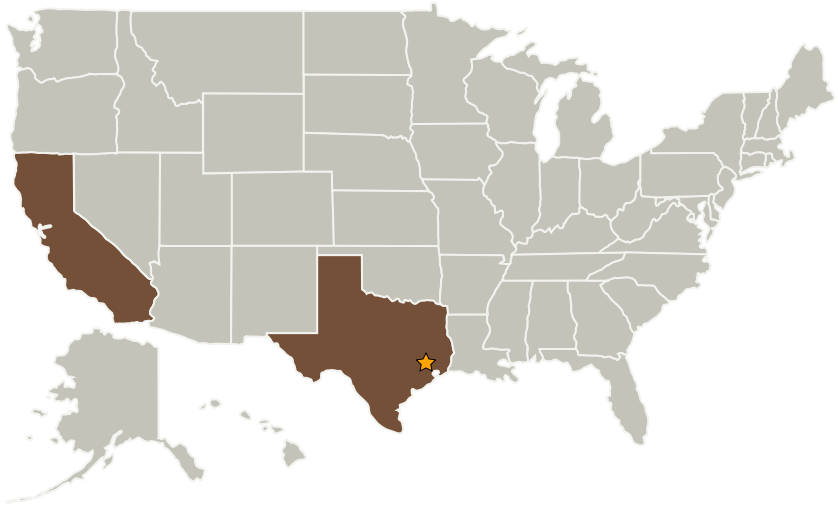
Wearable Health Monitoring Systems, Phase II

Completed Technology Project (2008 - 2010)

Project Introduction

The objective of this proposal is to demonstrate the feasibility of producing a wearable health monitoring system for the human body that is functional, comfortable, bendable in 3 dimensions, durable, water-proof, washable, and light-weight. This new technology area of wearable health systems, sometimes referred to as smart-clothing, promises to allow for a secondary human nervous system that connects various different electronic devices positioned on or around the human body. As the shrinking in size and weight of electronic circuits has progressed, it is now possible for the modern human astronaut to carry increasing numbers of different electronic devices and sensors such as thermometers, gas monitors, microphones, altimeters, digital processors, digital memory, and push-button controls. These devices allow the astronaut to access data about their current environment and health status, and communicate with other astronauts and/or databases to send and receive information of value. As the variation in the number of devices and sensors that can be deployed increases greatly, a new technology is required to allow the seamless integration of these devices with the human astronaut so that the devices can be electrically powered, operated, re-charged, and communicate with each other over a digital pathway.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Nyx Illuminated Clothing Company	Supporting Organization	Industry	Culver City, California

Primary U.S. Work Locations	
California	Texas

Project Transitions

February 2008: Project Start

February 2010: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.4 Contact-less / Wearable Human Health and Performance Monitoring